Summary

S.1 Proposed Project

The Contra Costa Transportation Authority (CCTA), in cooperation with the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans), proposes to widen State Route 4 (SR 4), its interchanges, and affected local roadways from approximately 1.3 kilometers (0.8 mile) west of Loveridge Road to approximately 1.2 kilometers (0.7 mile) east of Hillcrest Avenue. Figure 1.1-2 in Chapter 1 illustrates the SR 4 widening project vicinity. The proposed project would consist of the following actions:

- Widen SR 4 from the existing four lanes to eight lanes. The widened freeway would consist of one HOV lane and three mixed-flow lanes in each direction.
- Preserve sufficient width in the SR 4 median through the Loveridge Interchange to accommodate a possible future public transit improvement (by others).
- Reconstruct SR 4 interchanges to accommodate the freeway widening at:
  - Loveridge Road
  - Somersville Road
  - Contra Loma Boulevard–L Street
  - Lone Tree Way–A Street
  - Hillcrest Avenue
- Eliminate partial interchange at G Street and reconstruct the overcrossing.
- Add auxiliary lanes between interchanges from SR 4 on-ramps to off-ramps.
- Provide capability to add ramp metering facilities including high occupancy vehicle (HOV) preferential lanes and California Highway Patrol (CHP) enforcement areas where feasible.
- Widen the Roosevelt Lane Pedestrian Undercrossing and the Cavallo Road Undercrossing.
- Extend drainage facilities that cross SR 4 in the project area.

A detailed description of these actions is presented in Section 1.3.1, Build Alternative.

The proposed project would conform to improvements currently being constructed to the west of the project area as part of the Route 4 / Railroad Avenue Interchange Project (by others) as well as to improvements proposed to the east of the project as part of the SR 4 Bypass Project (by others).

This environmental analysis evaluates the proposed SR 4 widening project (the Build Alternative) as well as a No-Build Alternative. The No-Build Alternative assumes no major improvements to SR 4 through the project limits other than those currently planned and programmed as well as continued routine maintenance (a detailed description of the No-Build Alternative is presented in Section 1.3.2). The No-Build Alternative would not satisfy the project purpose and need objectives but is being studied in accordance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements. It offers a basis for comparison with the Build Alternative in the future analysis year of 2030.

S.2 Purpose and Need

S.2.1 Project Purpose

The purpose of the proposed SR 4 widening project is to reduce existing congestion, improve traffic operations, encourage use of high occupancy vehicles (HOVs), and accommodate anticipated travel demand through the year 2030.

The project was included in the Expenditure Plan for Contra Costa County's Measure C, a local one-half cent transportation sales tax, which was passed by county voters in 1988.

S.2.2 Project Need

The SR 4 East Widening Project is an important component of the overall program to improve transportation in Eastern Contra Costa County. By widening the freeway, reconstructing interchanges, constructing HOV lanes, and preserving right-of-way for a future public transit extension in the freeway median (through the Loveridge Road interchange), the project will address the following needs:

- Reduce existing and projected traffic congestion.
- Accommodate future travel demand
- Reduce vehicular traffic on local streets.
- Reduce travel time and delay.
- Encourage use of carpooling during peak travel hours (by providing HOV lanes).
- Improve system reliability for freight movement.
- Reduce energy use (by reducing idling caused by traffic congestion).
- Improve local and regional air quality (by reducing idling).
- Improve safety.
- Preserve right-of-way for a future extension of public transit (by others).
- Encourage public transit use.

Finally, the project would prepare SR 4 for potential future traffic flow improvement strategies by constructing on-ramps at interchanges to accommodate future ramp metering, HOV preferential lanes, and CHP enforcement areas. Section 1.2, Purpose and Need, of this document presents a detailed description of current transportation problems along SR 4 and the needs that would be addressed by the project.

S.3 Environmental Impacts and Mitigation Measures

Based on the environmental analysis completed for this evaluation, the SR 4 East Widening Project Build Alternative would have lower environmental impacts than the No-Build Alternative. The No-Build Alternative would result in substantially adverse impacts in terms of continued SR 4 traffic congestion and delay, with expected peak period traffic congestion ultimately extending up to 13 hours per day. Related impacts would include continued degradation of mainline and interchange levels of service, frequency of accidents exceeding statewide averages, and diversion of traffic to local streets. Energy use and air emissions would also be greater than under the Build Alternative. Traffic noise would increase under the Build Alternative, but sound walls consistent with federal noise abatement criteria would likely be provided. There would be displacement/relocation impacts. *There will be permanent and temporary effects to habitat for California red-legged frog.* Impacts to wetlands/waters of the U.S. would be very small. The project is expected to qualify for a nationwide permit under Section 404 of the Clean Water Act, and the NEPA-404 Integration process is not required.

Table S-1 summarizes the environmental impacts of the Build Alternative and identifies the proposed avoidance, compensation, and minimization measures for each impact. A detailed description of the impacts and mitigation measures for each impact category is presented in Sections 2.1, 2.2, and 2.3, Human Environment, Physical Environment, and Biological Environment, respectively. Construction phase impacts are described starting in Section 2.4.2.

Table S-1: Summary of Build Alternative Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Permanent Impacts		
Human Environment		
Land Use Changes	Conversion of 12.94 hectares (31.96 acres) of residential, industrial, commercial, and vacant land to transportation uses.	None required.
Displacements/ Relocations	Displacement and relocation of 44 residential properties and 20 businesses.	Compensation and relocation assistance consistent with state and federal laws.
Consistency with Plans	Project is consistent with local plans, goals and policies.	None required.
Growth Inducement	Project would not induce unplanned growth.	None required.
Agricultural/ Farmland Impacts	No impacts to agricultural lands/farmlands	None required.

Table S-1: Summary of Build Alternative Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Permanent Impacts		
Utilities	Conflicts with 39 utility lines.	CCTA would be responsible for coordinating utility relocations with local providers to avoid disruptions in service.
Emergency Services	Project would not disrupt emergency services or increase response times.	None required.
Traffic/Safety	Improvements to traffic levels of service along all SR 4 segments, with 40% increase in peak demand served in peak directions; ramp junctions in weaving sections would have similar or improved operations. Improvements to traffic speeds along all segments. Improvements in travel times along all segments, with 50% decrease in travel times for peak directional periods. Reduction in travel delay, with 80% reduction during peak periods. Improvement to vehicular level of service for most intersections. Others not degraded, except for one intersection. This would be offset by improvements to mainline, ramp, and other intersection levels of service. Projected reduction in number of accidents.	None required.
Transit Services	Improved conditions for local and regional express bus service on SR 4 and connecting corridors in central, southwest, and west Contra Costa County. Bus services would operate at free flow speeds in the HOV lanes through the project area. Reduced transit travel time and improved transit schedule reliability.	None required.
Pedestrian and Bicycle	Improved facilities/access.	None required.
Parking	Removal of 274 private parking spaces.	Relocation or replacement of parking spaces.

Table S-1: Summary of Build Alternative Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Permanent Impacts		
Visual/Aesthetics	Visual changes from roadway widening and alignment shifts, construction of auxiliary lanes, reconstruction of structures and crossing roadways, changes in interchange configurations, retaining walls and sound walls.	Planting concepts and hardscape aesthetic design treatments consistent with Caltrans landscaping requirements and SR 4 East Corridor Visual Design Guidelines would avoid adverse impacts on overall visual quality.
Archaeological Resources	No sites eligible for National Register of Historic Places (NRHP). Corridor is not sensitive for buried archaeological resources.	None required.
Historic Architectural Resources	No structures eligible for NRHP.	None required.
Physical Environment		
Hydrology/ Drainage	Project in 100-year flood hazard area.	Hydraulic modeling during final design. Upgrade of existing pump station at Loveridge Road interchange.
Water Quality/ Stormwater Runoff	Increases in impervious surfaces. Potential pollutants from area surface runoff, particularly from "first flush" runoff.	Best Management Practices (BMP), e.g., erosion control measures and such structural treatments as detention/filtration basins.
Geology/Soils	Moderately corrosive soils. Soft ground/potential settlement. Slope stability of embankments, subject to weather, will be affected.	The final design and materials selection of foundation systems and culverts will consider the potential effect of soil corrosivity. Waiting period for settlement. Application of seismic design standards to withstand maximum credible earthquake. Site specific seismic analysis for individual structures. Proper drainage and erosion controls.

Table S-1: Summary of Build Alternative Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Permanent Impacts		
Hazardous Waste/Materials	Potential impact from Underground Storage Tank site – service station in Antioch.	Additional testing and remediation if necessary.
Air Quality	No increase in emissions from vehicle operations. No carbon monoxide exceedences at intersection hot-spots. Meets USEPA's project level conformity criteria.	None required.
Noise	Increase in ambient noise levels in the project vicinity.	Noise Abatement Measures will reduce noise levels.
Energy	Reduced vehicle energy use.	None required.
Wetlands and Other Waters of U.S.	Less than 0.5 acres affected.	Mitigation banking or on-site/in kind replacement of wetlands will compensate for impacts.
Vegetation and Wildlife Communities	No substantial adverse effect.	None required
Threatened and Endangered Species	*Permanent effects to 1.42 acres of upland habitat for California red-legged frog.* *Permanent effects to 0.15 acres of aquatic habitat.*	*Compensation at 2:1 ratio (2.84 acres).* *Compensation at 3:1 ratio (0.4 acres).*
Invasive Species	Weeds can be inadvertently introduced into the corridor during construction.	Avoidance and minimization measures will be incorporated into the construction specifications.

Table S-1: Summary of Build Alternative Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Construction Phase Impacts		
Transportation and Traffic	Temporary night-time freeway lane, ramp, and local road closures or detours. The construction of a retaining wall adjacent to the Lakeview Apartments in Pittsburg could temporarily affect covered parking containing about 89 spaces in the apartment complex.	A Transportation Management Plan would be developed to provide advance notice and minimize the inconvenience and delay to motorists and transportation and emergency service providers of information on construction activities and durations, detours, and access issues. Freeway service patrols could be included in the plan to reduce the impacts of accidents and stalls on the roadway during the construction period. Temporary parking impacts at Lakeview Apartments would be avoided or minimized. If impacts cannot be avoided, relocation or replacement of parking spaces will be provided after coordination with apartment owner.
Utility Relocations	Short-term, limited interruptions of service would be required for utility relocations or if unexpected utilities are encountered.	Plans will be developed to address the utility conflict and limit service interruptions.
Emergency Services	Road closures or detours could lead to emergency service delays.	Through coordination with emergency service providers and public information program, emergency service delays will be avoided by ensuring that all providers are aware well in advance of road closures or detours.
Hydrology and Floodplain	Construction associated with waterway crossings could cause temporary changes in water volume or flow and increased siltation, sedimentation, erosion and water turbidity from bank-side activities and construction access.	A Stormwater Pollution Prevention Plan (SWPPP) will be prepared and will identify construction-period Best Management Practices to reduce impacts to surface waterways.

Table S-1: Summary of Build Alternative Impacts and Proposed Mitigation Measures

Impact Category	Build Alternative Impacts	Proposed Avoidance, Compensation and Minimization Measures
Construction Phase Impacts		
Water Quality	Construction activities could pollute surface water bodies or cause bank-side erosion.	SWPPP will identify construction period BMPs to avoid impacts to surface waters.
Hazardous Waste/Materials	Potential exists for the release of hazardous materials that are used for construction operations and for the release of lead and asbestos during construction due to the disturbance of the adjacent soil and demolition of structures.	An approved worker health and safety plan (WH&SP) would address any hazardous materials handling during construction activities. It would also address storage and disposal of any hazardous/materials used in construction operations.
Air Quality	Construction activities such as clearing, grubbing, grading and excavation would generate air pollutant emissions.	Appropriate construction control measures such as site-sweeping, site-watering, and limiting travel speeds on unpaved roads will reduce impacts.
Noise	Temporary increase in ambient noise levels in the project vicinity.	Equipment noise control, and administrative measures, and adherence to local noise ordinances will minimize effects.
Wetlands and Other Waters	Temporarily affects 0.012 hectares (0.03 acres).	Wetland habitats that are temporarily lost or disturbed would be restored on-site to pre-construction conditions.
Special Status Species	*Temporary effects to 1.04 acres of upland habitat for California red-legged frog.*	*Restoration at 1:1 ratio (1.04 acres).*

S.4 Costs and Funding

The No-Build Alternative would require no immediate investment of capital other than for ongoing operations and maintenance and for currently programmed transportation improvements (see Section 1.3.2 for a list of those improvements). The cost of obtaining the necessary right-of-way and constructing the SR 4 East Widening Project is expected to total $307 million, with construction costs of $232 million and right-of-way acquisition costs of $75 million.

The project would be funded from a variety of local, state, and federal sources. Federal and state funding sources would be identified in the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP). Local funding sources would include Contra Costa

County's local transportation sales tax, Measure C, as well as development impact fees and other local sources. The project is included in the financially constrained portion of the Bay Area's Draft 2005 RTP and will be updated in the 2005 RTIP.

S.5 Construction Schedule

The current project schedule anticipates that right-of-way acquisition would begin in 2005 and continue until 2007. Construction would begin in 2007 and last *nine to ten* years, with project completion scheduled for *2017*. It is expected that the project would be constructed in stages, with each interchange and its associated mainline roadway constructed in a separate stage. This strategy will be used to minimize disruption to the traveling public. The process would move from interchange to interchange from west to east. Section 2.4.1, Construction Stages, Schedule, and Work Hours, presents a detailed discussion of possible construction phasing.